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FOUNDED BY WILLIAM HUNTING, F.R.C.V.S.

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CATTLE PRACTICE.

This week and last have each brought us an interesting contribution to this distinctly neglected subject. Mr. Squair's clinical note of a case of dental alveolitis is of value because so few similar cases in the ox are recorded. They may be more common than we suppose; but there is no evidence of their frequence in the journals, and this record will be helpful to some members. Far too few cases of general bovine medicine and surgery are reported—most of the not too numerous members who do record cases in cattle seem to confine their notes to a comparatively few well-known conditions. Hence we have fair but not abundant records of bovine tuberculosis, milk fever, some obstetric troubles, some poisonings, œsophageal impaction, and a few other conditions; but behind these there is a large and varied field of cattle practice of which our journals reflect but little. Some apparently trivial subjects in that field are really important—Mr. Squair's case, for instance, was most distinctly one of minor surgery, but continued failure to diagnose it might well have ended in the slaughter of the cow.

Mr. W. R. Davis opened a subject of very wide importance last week, when he attacked the time-honoured use of magnesium sulphate as a bovine aperient. In no animal are digestive troubles more frequent, more difficult in their diagnoses and treatment, and less clearly understood than in the ox; and in none is the choice of a suitable aperient more important. We fancy that not a few clinicians of experience—perhaps far more than would be supposed—would be found to be more or less in agreement with Mr. Davis, if they could be induced to make their views known; but it is certain that a great many others still adhere to the old practice. If Mr. Davis is right, or even anywhere near right, that state of things is no credit to the profession. It can hardly be denied that, as a profession, we have been rather lax in the whole question of the selection of appropriate purgatives for different animals. We all know that aloes is far from being an ideal purgative for the horse; but how many men have ever concerned themselves to find a better? How many have ever seriously asked themselves whether magnesium sulphate deserves its old reputation for cattle?

There are a host of subjects in veterinary practice concerning which too little has been written; and perhaps, of all its departments, this is most true of cattle practice. These two contributions, one of limited and one of very wide importance, show how much that department still holds for record and discussion.

UNSUSPECTED DENTAL TROUBLE IN A COW.

The following might not be without interest to your readers—the second part of it being unique as far as I am concerned.

Subject, an aged shorthorn cow. About the end of June, I was called upon to visit the animal as she could not get up since she calved, two days before. The cow was in perfect health, ate and drank well—no milk fever or anything of that sort, but could not raise herself. I administered a purge and applied a stimulating liniment to the spine. For some years now in such cases I invariably make it a practice to inflate the udder. I did so in this case, and in two hours the cow was up and went on well.

About six weeks afterwards I was told by telephone that the cow I had attended was unable to eat, and asked to call and see her. I did so, and found the animal anxious for food, which she would get into her mouth but immediately drop out again; saliva continually dribbling from the mouth.

I suspected an offending molar, with an eye to the presence of a foreign body, such as a pin or a needle, lodged in the mouth. Had cow gagged and held straight, explored everywhere, all along molars, tongue, pharynx as far down as I could get, but found nothing.

I called again next day and repeated my examination, with the addition of passing the probang right into the stomach, but all to no purpose.

Called again in a few days and found no improvement: applied a smart blister over pharyngeal region, as possibly paralysis of pharynx might be the cause.

Saw cow again in about three days, but there was no improvement. All this time the animal could drink water and get through a sloppy mash, but could not manage green stuff of any sort.

Again I had her gagged and held, and I then noticed that there was a congested appearance around an incisor tooth which was a bit loose; up to now I had always been looking further back.

I had not a tooth forceps with me, but found a substitute in my motor, and with its aid promptly extracted the incisor tooth, and about a tablespoonful of matter exuded. As the next tooth was none too firm in the gum I pulled it out also, but there was no matter underneath in this case. Even after doing all this I was not quite satisfied that this little incisor tooth was the cause of all the mischief; but it turned out that it was so, as the cow is now—a fortnight after—doing well, eating

perfectly, and giving five gallons of milk a day. During the time the animal could not eat she became very thin, but is now rapidly getting back to her old form.

CHARLES A. SQUAIR.

Reigate, Aug. 16.

ABSTRACTS FROM FOREIGN JOURNALS.

GIANT-CELLED ANGIO-SARCOMA IN A FOAL.

G. Lisi has recorded the case of a female foal, five months old, which one day commenced to show a poor appetite and to breathe with difficulty. This increased to such an extent that the animal soon became marasmic, and had to been destroyed (*Il nuovo Ercolani*).

Post-mortem, Lisi found tumours situated in both the abdominal and thoracic cavities. In the abdominal cavity, under the left pillar of the diaphragm, there were two tumours, the larger with a diameter of $1\frac{1}{5}$ inches, and the smaller with one of $\frac{4}{5}$ inch. In the same position, but on the opposite side, was another tumour of small dimensions. In the thoracic cavity, in front of the auricles, there was a tumour $1\frac{1}{5}$ inches in diameter, and another of $\frac{2}{5}$ inch adhered to the first dorsal vertebra. No tumours were found in any other part of the body.

All the tumours were enveloped by a fine capsule of connective tissue. They cut easily; and their cut surface was granular in aspect and of a pale rosy colour. Lisi examined a considerable number of histological sections cut from tissues of the tumours which had been fixed in sublimate, hardened in a series of alcohols, and stained with hæmatoxylin, hæmatoxylin and eosin, borax carmine, and various other methods. He gives a detailed account of the results, which is here briefly summarised.

Histologically, the tumours appeared to be constitued by three zones. The external zone was formed of fibrillar connective tissue, infiltrated at various points by young connective tissue corpuscles, and with thin-walled vessels filled with erythrocytes. The median zone was constituted by cells of sarcomatous nature. In its thickness were numerous giant cells varying in size, and delicate vessels filled with red globules or partly obstructed by sarcomatous cells. The internal zone was formed by more or less dense connective tissue, and united with the median zone by connective prolongations. At the periphery of this zone, an encircling layer of lymphoid cells was seen. At its centre, in some of the sections, this zone presented more or less extensive lacunæ, supported by a fine fibrillar network, in which connective tissue corpuscles and sarcomatous cells were seen.

It was not possible to find either Koch's bacillus or any other element of bacterial or mycotic nature in any of these tumours. The case was one of true giant-celled angio-sarcoma, which is rarely found in the domestic animals.—(*Revista de Higiene y Sanidad Veterinaria*).

ANGIO-FIBROMA OF THE CHORION IN A BITCH, AS POSSIBLE CAUSE OF ABORTION.

G. C. SPARAPANI, in 1913, recorded the following rare case (*Il nuovo Ercolani*). The subject was a bitch of the King Charles breed, weighing about eleven pounds. The author was able easily to diagnose uterine pains in this animal; but it was impossible to allay them. The only result of treatment was the abortion of a regularly formed fœtus of about five weeks' gestation. After the abortion, the bitch remained well. The fœtal annexes weighed 75 grammes (= a little over $2\frac{1}{2}$ oz.) The amniotic liquid which came away before the expulsion of the fœtus was somewhat greater in quantity than the normal.

Upon the external aspect of the chorion, two centimetres from the right margin of the placentar ring, was a lobulated tumour of reniform aspect, yellowish-red in colour, and the size of a large walnut. The superior aspect of the tumour, which was directed towards the uterine wall, presented a surface which was free, and was irregular from numerous furrows of varying depth. The inferior aspect was lightly adherent to the external surface of the chorionic membrane, which was easily detachable. The tumour measured three centimetres longitudinally, two centimetres transversely, and two centimetres in thickness. Its consistence was soft. Its sectional surface showed two distinct zones, of which the cortical one was slightly more dusky, reddish, and consistent than the central one. It showed the openings of macroscopically visible vessels, especially towards the periphery.

Microscopic examination of sections of the tumour, imbedded in paraffin and stained with hæmatoxylin and eosin, revealed the presence of a great number of vessels of small calibre, limited by a wall of endothelial cells, and giving the tissue a sieve-like aspect. These capillaries appeared more numerous in the peripheral part of the tumour. In addition to them, there were some vessels of larger calibre, provided with endothelial and connective-muscular walls—almost small arteries or veins. Round about these, as centres of irradiation, the capillaries were grouped. The fundamental tissue of the tumour was constituted by connective elements in various stages of evolution, with large and fusiform cells and very abundant connective fibrillæ, the greater quantity of which was in the central part. At no point did signs of necrosis or degeneration appear, which indicated that the tumour was in full activity of development.

Such was the structure of the tumour, which presented the characteristic connective tissue of the chorionic stroma and contained an exuberant vascularisation which recalled the angiomata. For that reason, the author thinks that it may justly be called an angio-fibroma of the chorion. In all veterinary literature only three cases of this nature have been reported; and these were encountered by Cagny, Andre, and Morot. Sparapani's case is the fourth, and is the first in Italian veterinary literature.—(*Revista de Higiene y Sanidad Veterinaria*).

W.R.C.

EPIZOOTIC ABORTION EXPERIMENTS IN OXFORDSHIRE.

County Offices, Oxford,
22nd August, 1916.

Dear Sir,

In your editorial note of August 19th you were good enough to give prominence to my Second Report on vaccination against cattle abortion in Oxfordshire, and you remark very rightly that the interpretation of results might be confused by: (1) the tendency of the disease to wear itself out, and (2) the coincident effect of general measures of hygiene.

I would like, therefore, to draw attention shortly to the conditions prescribed for the trials by the Chief Veterinary Officer of the Board of Agriculture, and his explanation of the aims of vaccination, as follows:—

(*a*) As far as possible the operations were to be conducted on badly infected herds and particularly on new animals coming into these herds.

(*b*) In order that the vaccination might be tested under the severest conditions no special hygienic measures against abortion were to be put in operation.

(*c*) It was explained that by prolonged contact with natural infection the original members of the herd became resistant, and that after a period of about three years, during which heavy losses are incurred, the number of abortions was greatly diminished amongst the original members of the herd, though the proportion of cases in the animals newly introduced often remained high.

(*d*) The aims of vaccination were:—

(i) To render the new animals actively resistant before coming into the infected herd, and so reduce the loss of calves, etc., amongst this class of animal.

(ii) To hasten the process of acquiring active resistance amongst the cows already in the infected herd, so that the losses in calves, milk, etc., might be reduced to the minimum in a shorter period than that required by a process of natural infection.

It will be observed, then, that the question is hardly one of confusing the results of vaccination with the tendency on the part of the disease to wear itself out so to speak, as this natural tendency is being taken advantage of, and, to some extent, dictated the method. According to the Board's professional authorities the real question seems to be whether, by vaccination, the process of "wearing out" can be expedited and accomplished with less loss than by allowing infection to spread gradually through the herd in the natural way.

I would like to add it was evident to the Board that it would be of great advantage if a means could also be found for dealing with animals already pregnant. Accordingly attempts were made to do so in Oxfordshire by repeated injections of dead bacilli, which, I understand, constitute "vaccine" in the commercial sense.

The results with vaccine consisting of dead bacilli were, unfortunately, a complete failure, and after considering them the chief veterinary officer came to the conclusion that dead vaccine was a useless and expensive method and that it would be deluding the farmer to continue its use. I may say that the conclusion was arrived at by comparing the results in cows inoculated with dead vaccine, in those inoculated with living vaccine, and in controls which received no vaccine of any kind; all living under the same conditions as to infection.—I am, Sir, yours faithfully,

G. R. Bland, Agricultural Organiser.

Sheep losses in Argyllshire—an inquiry.

By Peter Reid, F.H.A.S., Glasgow.

In order to make up as accurate an estimate as possible of the actual losses among sheep in Argyllshire, I obtained from the County Clerk a return of the number of sheep dipped during the first dipping period of 1915, together with the names of twenty of the principal flockmasters in each district—*i.e.*, 120 in all. To these I addressed the following queries:—

Total number of sheep dipped during first dipping period, 1915.
Number of deaths in stock for year from October, 1914, till October, 1915, including hoggs at wintering.
Estimated deaths in lambs not included above.
Estimated money value of total loss.
Number of ewes as at November, 1913.
Number of lambs marked, May, 1914.
Number of hoggs sent to wintering, October, 1914.
Number of hoggs returned, April, 1915 (including hoggs sold).
Cost of wintering hoggs.
Estimated average death rate in district among hoggs wintered at home.
Has the death rate for 1914-15 been either above or below the average death rate on the farm?

The following calculations are based on replies received:—

On farms where 93,868 sheep (including lambs) were dipped, there was a loss of 6989 sheep and 3809 lambs.

As the farms from which the returns have been got are in all the different parts of the county, it is not unreasonable to assume that the death rate on them represents the average death rate in the county. Now the total number of sheep (including lambs) dipped in the county was 789,780. If therefore 93,868 gives a loss of 6989 sheep and 3809 lambs, 789,780 would give a loss of 58,800 sheep and 32,000 lambs. On farms where 76,962 sheep were dipped there was an estimated money loss of £8664 which brings out for the county a loss of £88,900. On farms where 78,719 sheep were dipped there were 41,999 ewes in November, 1913, and the number of lambs marked on these farms in May, 1914, was 32,005, making a difference of 9985, or for the county, 100,170. The amount paid for hogg wintering for farms where 78,719 sheep were dipped was £4502, which works out at £45,100 for the county.

In looking into some of the returns where the "estimated money value of the total loss" is given, it is evident that no account of loss in lambs is taken, so that the sum of £88,900 does not represent the actual loss.

My estimate of the loss based on the numbers given is as follows:—

58,800 sheep, at 30s.	...	£88,200
32,000 lambs, at 10s.	...	16,000
90,800		£104,200
Half cost of hogg wintering	...	22,550
		£126,750

It is quite evident that the loss in lambs is understated. I have no actual figures to go by, but judging from my own experience and the opinion of others, I would say that at least half of the ewes without lambs at the time of marking had lost their lambs—that is to say, that not more than half of the ewes without lambs were actually barren or "tup yeld." On this assumption there is a loss of about 50,000 lambs from the time of birth till the time of marking. The cost of having to send hoggs away to wintering is such a serious matter

as to force the sale of all lambs that are not actually required to maintain the stock.

On farms where 87,156 sheep were dipped there were 35,838 lambs marked, of which 14,348 were sent to wintering, and 13,293 returned. If 87,156 sheep dipped give 35,838 lambs marked, then 789,780 would give 324,290 for the county, and by applying the same method, the total number of lambs sent to wintering works out at 130,000, and the number returned at 120,450. The difference between the number of lambs marked and the number sent to wintering is 194,290. This indicates approximately the number of lambs sold plus the number of deaths from the time of marking till the lambs are sent off the hill.

OPINIONS OF FLOCKMASTERS.

The following are examples of remarks made:—

"My experience of about 40 years leads me to think that the death rate in lambs wintered in the Mull district is sometimes as high as five in the score, mostly from braxy. Of course, wintering is the great cost of sheep farming in that county; in fact, when prices were bad, though my wool always brought the highest going, and purchasers had no complaints of it, I was farming at a loss, and could not have gone on without other means. . . . If the Board of Agriculture could find a way of making the lands healthy in the West, they would be doing better work for the country than by some of their abortive and costly schemes, and I cordially wish you success."

"If the country wishes to increase its food supply, it cannot do better than invest its money in helping to do away with braxy and brackens. Being a woman I did not wish to lift my voice. I wish you success."

"Cost of wintering hoggs, 9s. 6d. per head; average death rate in district about 40 per cent."

"I have noticed that heather burning and draining prevent deaths among sheep to a great extent."

"To my mind, a cure for braxy would not do much good, as the sheep are practically dead when you detect the disease."

On one occasion ewes were sent from Ayrshire to a farm in Argyllshire, "there were over 80 of them, and I got 19 back to save their lives in a few weeks, and that number survived and did well."

"I agree with you that serious investigations into the causes of braxy and louping-ill should be undertaken by the Government, and this would do more to increase our food supplies—provided a cure or preventive was discovered—than anything else that can be done in the Highland districts. If this was the United States, the best man that money could get would be put on investigate and decide definitely whether or not these scourges could be prevented. I know one intelligent farmer in this locality who bought 19 tup lambs at Perth in the autumn of 1914, and only had 3 left in October, 1915."

EFFORTS AT IMPROVEMENT.

At the October meeting (1915) the Argyll County Council passed the following resolution:—

"That the County Council, having in December, 1912, made an offer of £100 to the Glasgow Veterinary College for the purpose of research into the diseases of braxy and louping-ill, regret to learn that notwithstanding the necessary preliminary steps having been taken by the the Glasgow Veterinary College, further action has been delayed owing to the decision of the Development Commissioners to withhold in the meantime the proposed grant. Meanwhile the County Council recognise the importance of stringent economy, they consider the decision of the Development Commissioners is most unfortunate, as the loss of 78,000 sheep per annum in one county alone represents a wastage of food supplies entirely disproportionate to the grant required for the investigation of the loss. They would therefore urge upon the Commissioners to reconsider their decision, in order that steps may be taken to reduce the enormous loss to the country by the devastation of the diseases of braxy and louping-ill."

The Board of Agriculture for Scotland communicated with the Development Commissioners in the matter, and received a reply stating that, "there is no probability at present" of any consideration of the matter, and that, "It appears to the Commissioners that at present there are more urgent calls upon the services of veterinary experts and upon public finances than those connected with the proposed committee and the forms of veterinary research in question."

This letter speaks for itself. A committee was not even convened to consider the matter. Is it right that the Argyll County Council and the Glasgow Veterinary College should be treated like supplicants for charity and have their representations summarily dismissed, without an opportunity of having the merits of the case even discussed, instead of being recognised as intelligent bodies whose aim it is to perform work of national importance?

This action is entirely subversive of the objects for which the Development Commissioners were appointed.

That such an enormous wastage of sheep life should be allowed to take place without any organised effort being made to reduce it, is most discreditable. Proprietors and others interested would, I have no doubt, assist by subscriptions and co-operation.

"The results of actual scientific research might not be felt for some time, but the application of scientific methods would bear immediate fruit. I look upon 'deadly' farms as infected areas, and it is a well-known fact that these farms are often separated from healthy farms merely by a wire fence.

It has also been demonstrated that braxy, louping-ill, black-leg, foot-rot, and, in fact, nearly all diseases are due to specific organisms or bacteria of one kind or another, and in most cases 'these bacteria or their spore are in the ground or on the pastures, and are taken up by the mouth when feeding (Prof. Hamilton). While scientific men are debating regarding the specific names of these bacteria, they are allowed to multiply freely and continue their fatal work without let or hindrance.

Concentrated efforts should be made to clear the pastures of deadly germs, and the methods to be adopted with this object in view should be fully considered. In the first place, flockmasters and shepherds should be warned to at once isolate all unhealthy sheep, to bury all carcases, and disinfect the ground on which they lay.

Many intelligent sheep farmers allow louping-ill sheep to wander about as long as they can, then lie and kick till they die, and shepherds give dogs sturdied sheep's heads to eat. One of the Veterinary College lecturers informed me that while looking on at an operation to remove the sac from the head of a sturdied sheep, he saw the operator throw the sac on the ground, and it was immediately licked up by a dog.

By having committees in different districts to carry out experiments under the direction of a scientific man, and having the results tabulated, there is every reason to believe that the death rate among sheep could be greatly reduced."

Note.—Since the calculations embodied in the report were made, additional returns have been received. These bring out a loss of over 60,000 sheep and 32,000 lambs, and the loss in lambs before they are marked must be very heavy, when in May, 1914, there were about 100,000 ewes without lambs. On one return the following remark is made: "I took over the farm in

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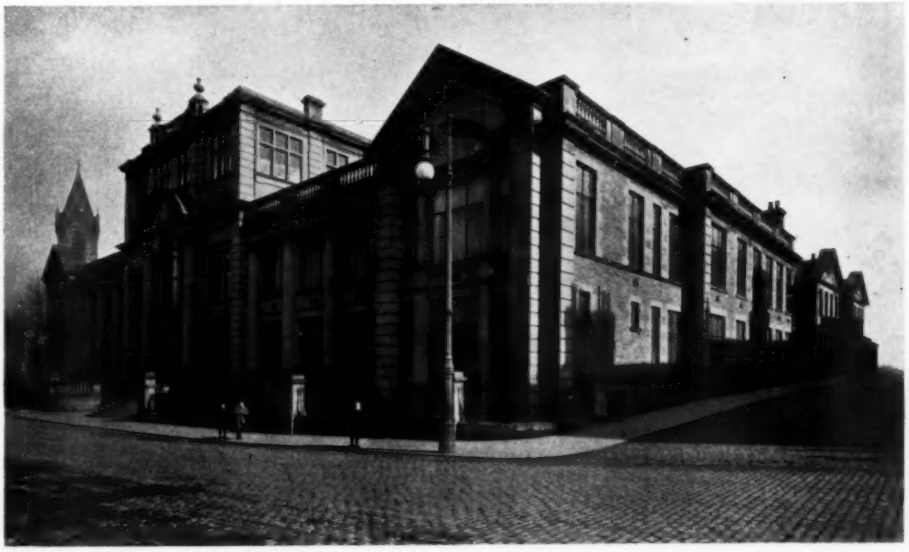


ROYAL (DICK) VETERINARY COLLEGE, SUMMERHALL, EDINBURGH.

May, 1914. 109 ewe hoggs were delivered. There must have been quite 250 ewe lambs in May, 1913. I do not think any were sold, so the deaths must have been about 141—wintered at home." Returns have now been received from owners of 111,000 sheep, so that the estimated loss for the county cannot be described as "guess-work."

Commenting on the foregoing, *The Scottish Farmer* says :—

There is another and an immediately pressing aspect of the question. Assuming the losses to be as great as Mr. Reid avers, can nothing be done forthwith to minimise these losses, and so increase the national food supply? The answer to this is an emphatic affirmative. In Islay a wire fence divided the lands of two proprietors. On both sides were sheep grazings. Heather was burned on the one side in a healthy and vigorous fashion ; on the other heather-burning was tabooed—the gamekeeper was a much mightier man than the shepherd. On the lands which were burned the death rate of sheep was very low, while on the other side of the fence trembling and braxy were rampant. Many experienced flockmasters testify that heather-burning and draining do much to lower the death rate. In one district of the county the death rate is put as high as 40 per cent., and the disease is most rampant between February and May. Another effective remedy is killing down the rabbits. This has been proved in the case of hoggs wintered at home, and it is a remedy like heather-burning which can be enforced at once. Scientific investigation is a slow process, and the issue may be long in being reached, but there need be no delay in applying these two drastic remedies. One farmer says distinctly: "Trembling is very bad owing to our not being allowed to burn plenty of heather." The frequency with which one hears such statements from experienced men suggests that the bacteria of these forms of sheep disease are in the ground.

"The Transactions of the Highland and Agricultural Society of Scotland, Fifth Series, Vol. XXVII,, 1915" (London: William Blackwood & Sons, 37 Paternoster Row), contains a lengthy article on this subject by Mr. J. P. McGowan, M.A., M.D., M.R.C.P.E., of the Royal College of Physicians' Laboratory, Edinburgh. It is headed, "Inquiry into Braxy," and it gives the history of the disease, describes the symptoms, and quotes the opinions of various authorities who have written about the disease both at home and abroad. It discusses the "braxy" bacillus of Neilsen and Jensen, which, according to Mr. McGowan, does not produce "braxy." He describes the pathology of "braxy" as it appears from his personal observation. A peculiarity connected with the symptomatology of the disease is that comparatively few cases are seen alive. Also most of the animals affected by it die during the night, and this in spite of the fact that they appeared all right when seen the night before. "One knows how very ill a sheep may be before it gives ocular evidence, even to the trained eye, of its condition, and it might be that the fact of their being found dead means nothing more than the sudden termination of an otherwise not fatal disease." This is hardly likely, taking all the circumstances into consideration, and it seems probable that it is in reality, in most instances, caused by circumstances occurring during the night.

A symptom, which is of great importance, is the action of the bowels. Many cases of scour may, Mr. McGowan concedes, be possibly mild cases of braxy. "It is a matter of common observation that while braxy cases are occurring in a flock, some of the other apparently healthy animals are suffering from scour."

Questions involving the identity of braxy and grass sickness in lambs and the relationship to it of "hoven," "head grit" and "bracken sickness" are discussed ; and there seems no reason to doubt that the two latter are caused by a member of the same group of organisms as that to which the braxy organism, *bacillus bipolaris septicus ovium*, belongs. As to hoven, two essential points distinguish it from braxy—absence of fever and rapid recovery when treatment with trocar is applied.

Discussing the effect of rainfall, he writes :—"The period of heaviest rainfall in the braxy districts—the autumn—coincides with the period of greatest incidence of braxy." So far, then, it would seem that a moist condition of the atmosphere has some relation to the occurrence of the disease. But on examining the replies relative to the occurrence of braxy, one finds that maximum occurrence of braxy is not markedly associated with heavy rainfall. The consensus of opinion, not only of those who have replied to the question in the circular, but of almost everyone who has written of the disease, is that hoar-frost, especially hoar-frost occurring suddenly after a period of damp, mild weather, is by far the most common antecedent of the appearance of the disease."

Many of the replies which Mr. McGowan received had a direct bearing on this. For instance, the following :—"Braxy is worst on one part of the ground which is marshy ground, and in very wet weather, in October to January, after frosty nights, I generally lose three or four of my young ewes."

"The low-lying land was distinctly the worst, and braxy readily occurred if the lambs were allowed to remain on the low pasture late in the day, and particularly so if there was any frost in September."

"On the low ground, when fed on foggage and turnips" ; and so on.

Royal Dick College—The New Buildings.

The following extracts are from a sketch of the History of the College which appears in the "Handbook commemorating Transfer to New Buildings." The handbook also contains a description of the new buildings: Notes on Veterinary Education, past and present: the Veterinary Curriculum: the Horse in War: the A.V.C.: Veterinary Science in Agriculture, in Public Health, in the Overseas Dominions: the I.C.V.D.: Endowments of the College: Portraits, Plate, Bursaries, and other details of the College and its work.

"On the 21st May, 1823, at a General Meeting of what was then known as "The Highland Society of Scotland at Edinburgh," a letter was read pointing out the desirability of having in Edinburgh a Professor or Public Lecturer who would give instruction in Veterinary Science. A Committee was appointed ; and at a meeting of Directors, held on the 4th July, a report was submitted in which it was stated that the appointment of a lecturer, under the patronage of the Society, was highly expedient. The Committee further recommended that the Society should be particular in the choice of the lecturer. The report was approved at a general meeting of the Society held on the 7th July, 1823.

A second report by the Committee was submitted at a meeting of Directors on 15th July, in which it was recommended that Mr. Dick, who, as they said, had already had experience in the giving of lectures, should be appointed lecturer. The Directors approved, and a sub-committee was appointed to attend to proper advertisements and such other details as might be necessary.

Thus, William Dick, a young man of thirty, gave the first lecture on Monday, 24th November, 1823, in the presence of the Veterinary Committee of the Highland Society, a number of medical men, and others interested in the venture; and thus the "Highland Society's Veterinary School," as it was long called, came into being.

At first, the lectures were given on Mondays and Thursdays, at seven o'clock in the evening, in the Calton Convening Rooms; but this arrangement was obviously not one which could be long continued if the school was to provide adequate training for its pupils. William Dick, therefore, acquired premises in Clyde Street, and constructed therein the nucleus of the Edinburgh Veterinary College.

The Directors of the Highland Society were early satisfied that the school was about to prove of value to agriculture; and at their meeting on the 29th June, 1825, they determined to call the attention of members of the Society, noblemen, landowners, and farmers, to what they described as "a very important but much neglected branch of rural affairs," and a circular was issued.

On the suggestion of Dr. John Barclay, the famous Edinburgh anatomist, the Highland Society determined to hold examinations once a year, and grant certificates to the successful candidates, declaring them "qualified to practise the veterinary art." The first public examination was held on 23rd April, 1828.

A "Report of the Committee of the Highland Society of Scotland, in charge of the Veterinary School," dated 12th May, 1830, concludes by pointing out that "an imperious duty devolves upon every district of Scotland to acquire the practical aid of a well-educated veterinarian; and it is satisfactory to state, what experience has established, that steady and intelligent young men, of plain, ordinary education, may be rendered extremely well qualified for veterinary practice after an attendance of two successive sessions under Mr. Dick." Copies of this report were sent to the various agricultural societies in Scotland.

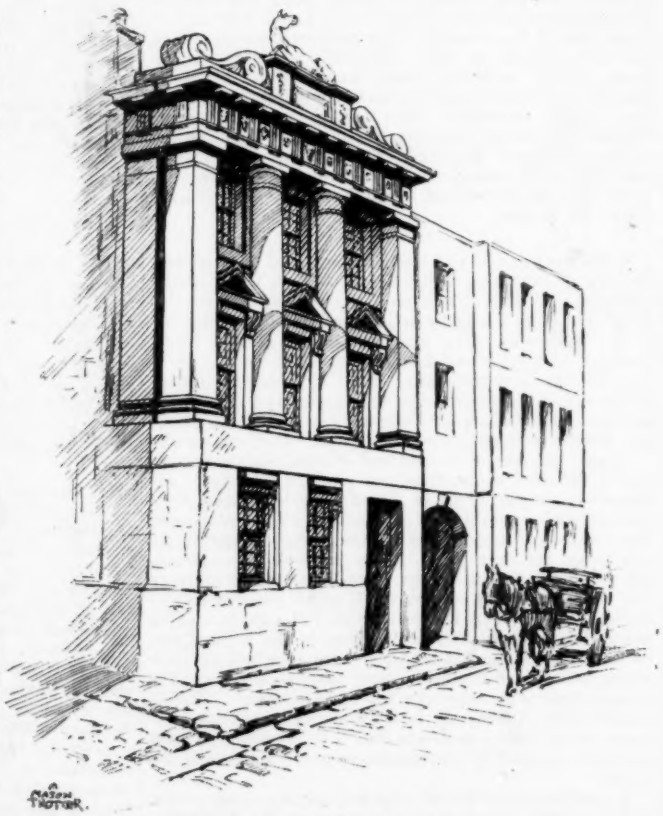
Apparently about this time (1830) the school consisted of a forge, a temporary hospital, a lecture-room, and a museum. In 1831 it is complained that the accommodation is scarcely suited to the celebrity of the school. Consequently, further and more permanent extensions were planned, and in 1833 new buildings were opened. These consisted of a lecture-room, museum, dissecting-room, infirmary, and forge, and cost some £2500.

William Dick's ardent desire that his students should have access to all positions to which their training entitled them, led him to take steps to procure their recognition as fitted for commissions in Her Majesty's Army and under the Honourable East India Company. The Highland and Agricultural Society again rendered invaluable assistance, with the result that in 1839 the first graduate of the Edinburgh Veterinary School obtained a commission as veterinary surgeon in the Army.

From the year 1839 the school became known as the "Edinburgh Veterinary *College*," and the head thereof was styled "Professor." Though of small moment in themselves, these changes of designation are indicative of the great and rapid progress which had been made in the short period of sixteen years. The number of students had increased from ten during the session 1824–25 to one hundred and one in 1838–39. With the increase in number came also a wider and still wider area from which they were collected. In 1836 Dick was able to claim, with pardonable pride, that "students are now in the habit of resorting to the Edinburgh Veterinary School from all parts of Great Britain and Ireland (even from London), and also from America."

A powerful influence upon veterinary education and veterinary science was exerted in 1844 by the grant of a Royal Charter, whereby the veterinary profession was recognised as such, and a body politic and corporate, to be known as the Royal College of Veterinary Surgeons, came into existence. For the Charter William Dick was one of the petitioners; and by the Charter his pupils were specifically mentioned as being eligible for Membership of the Royal College of Veterinary Surgeons.

On the 4th of April, 1866, in his seventy-third year, William Dick died. On his death he endowed the College of which he was founder, and thus provided for the continuance of the work he so enthusiastically initiated and triumphantly accomplished. By his will he named the Town Council of Edinburgh as his Trustees, and these administered the College until 1906,

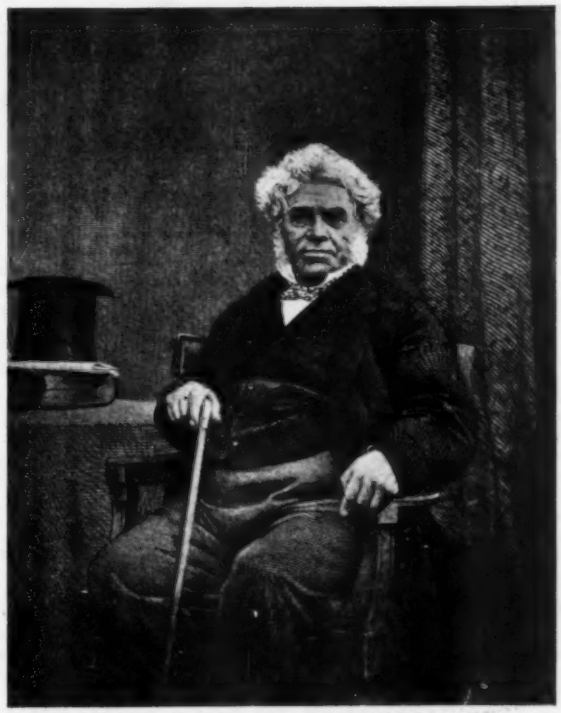


OLD BUILDINGS, CLYDE STREET.

in which year it was incorporated by Act of Parliament and placed under the guidance of a Board of Management representative of professional, educational, and agricultural interests in Scotland.

From the time of Dick's death until the early 'eighties the fabric of the Clyde Street College remained practically unchanged. With the gradual increase in the number of subjects taught, and the growing inconvenience arising out of the need to accommodate more and more students, the College authorities were compelled to rearrange and remodel the buildings. This was effected in 1886–87, and the result was considered as being likely to place the accommodation in a satisfactory condition for many years to come.

Early in the twentieth century it became obvious that further expansion was necessary. Modern educational methods demanded additional space for laboratory and hospital work; and the question had to be answered whether it was possible to make adequate provision by again remodelling the Clyde Street buildings. It was soon evident that this could not be done. The College authorities therefore determined to erect entirely new buildings on a site in a less congested part of the town, but one not far removed from the other great educational institutions. A site at the east end of the Meadows was decided upon and purchased, and building operations were begun in 1913. On the 21st July, 1914, the Memorial Stone of the new buildings was laid by the Most Honourable the Marquess of Linlithgow. The Right Honourable the Lord Provost of the City of Edinburgh presided, and there were present the President of the Royal College of Veterinary Surgeons, representatives of the Board of Agriculture for Scotland, the Highland and Agricultural Society, the Scottish Universities, and other Scottish educational and public bodies.



THE FOUNDER, WILLIAM DICK, 1793–1866.

Percheron *v.* Clydesdale in U.S.A.

HOW A BREED HAS BECOME POPULAR.

Mr. D. Weighton, writing to *The Scottish Farmer*, says:—

"The great determining factor as between the Percheron and the Clyde in the Western States is not a case of hair at all, but of the almighty dollar. For the price of one good Clyde stallion purchased in Scotland, three Percherons can be had for the same money on the other side of the English Channel—and this is no new development, but has held good for a generation. Given this great lever of cheapness, it follows clearly that for one man who can buy, and pay for, a good Clyde on the other side, five men can each purchase a Percheron. Spread five Percheron horses over a county, in place of only one Clyde, and what do we have? Five men all booming that particular breed, and only one to speak for the other. The connection formed by the mares sent to the five will also be multiplied fivefold, perhaps much more, as the cheaper horse has an unfailing attraction for many people. The progeny also will be far and away more numerous in the one case than in the other—again more boomers of the young horses which have to be cashed—more on the market, and many more buyers interested. Thus it will be seen how easily a whole county can become a Percheron county, as, in fact, often happens, not because of any superiority on the part of the Percheron, or of any particular trait in his get-up, but solely on account of his cheapness in the first instance allowing more breeders to become interested. I think it will not be disputed by those who actually know that *there is the true clue* to the popularity of the Percheron as against the Clyde.

I will admit that the Percheron is an early maturer: but although on the market somewhat earlier, which in a country like the U.S. counts for something, the inexorable law of nature comes in, and says, 'early mature, early decay.' They don't last anything like as long as the present-day type of Clyde, and the Americans don't seem yet to realise this any more than they do the absolute essentials of a good-wearing work horse. I have yet to hear of any Percherons which can hold a candle to Clydesdale records—I will mention two. Many in Central Illinois will remember Robert the Bruce (better known as 'Old Bob"), a Scotch-bred Clyde, the first horse of the breed introduced into that country, and imported by the late David Grant, of Petersburg. He withstood the trying heats and colds of that country till he was 27 years old, and got stock to the last year of his life, and during that time saw *scores* of Percherons come and go. Again, on this farm from which I now write, I can show a mare and a gelding, got respectively by Prince Lawrence and Prince of Carruchan, and now 26 and 21 years old, going daily in farm work, and holding their own with younger ones for all those years, and every joint they possess is yet as sound as the day they first saw the light! And these horses were all furnished with considerable quantities of hair, but of the right kind.

As to the prices realised on the open market for the representatives of the two breeds in question, while it may be they do occasionally run each other very close it must always be remembered that considerable numbers of the very pick of the Clydes never reach the open market, either at Chicago or elsewhere, but are readily secured at prices far beyond that of any open market by representatives of the big city firms who have the

shrewdness to know what the wearing qualities of the Clydes are. Contrary to the assertion that the horse possessing hair will not sell, I am assured on all hands that, given the best class of Clyde, with the razor bones, and silky fringe, which is always accompanied with such action as puts any representatives of the other draught breeds to the blush, he is always striven for, and paid for, as such a price as no Percheron horse ever equals."

Brax, Arbroath, February, 1916.

The Percheron in France.

An officer, writing from France, says :—

"The French people have started their harvest and, my word! how the women do work. From dawn to dusk they slave in the fields. Their energy seems endless, almost like those slim-looking *Percherons* that drag their primitive-looking carts. To me it is marvellous what this type of horse will drag, and the extraordinary stamina they possess. They seem to do about twice the work that our great Shire horses do, and yet they look as if they would drop to bits. There is no doubt about it—these French peasant women possess remarkable courage. I watched them cutting grass in a field which was well within the firing zone, and I saw two 'crumps' come down in the field they were working in; but they just went on as if nothing had happened. The other day when I was up at the gun I passed by a woman in a field tying up a cow's leg. I asked what was the matter. She replied, 'Oh, ce n'est pas grave, Monsieur, ce n'est q'un éclat d'obus.' Apparently a shell had fallen in the field in which the cow was grazing and wounded it slightly."

SUBSCRIPTIONS TO R.C.V.S.

The Secretary of the Royal College of Veterinary Surgeons begs to acknowledge the receipt of the following subscriptions for 1916 to the College funds :—

John Brown, Perth	£1	1	0
James Edgar, Capt. A.V.C.	1	1	0
George Gair, Dingwall	1	1	0
J. F. B. Moody, London	1	1	0
P. J. Mulcair, Limerick	1	1	0
R. T. Smith, Capt. A.V.C.	1	1	0
A. R. Smythe, Capt. A.V.C.	1	1	0
J. J. B. Tapley, Major A.V.C.	1	1	0
R. Tindle, Major A.V.C.	1	0	0
G. Watkins, Mareham-le-fen, Lincs.	1	1	0
R. M. R. West, Capt. A.V.C.	1	1	0
H. S. Woods, G.V.S., N. Rhodesia	1	1	0
Previously acknowledged	733	16	6
	£746	7	6

ARMY VETERINARY SERVICE

Extracts from *London Gazette*,

WAR OFFICE, WHITEHALL, Aug. 17.

REGULAR FORCES. ARMY VETERINARY CORPS.

Maj. H. M. Lenox-Conyngham, F.R.C.V.S., to be temp. Lt.-Col. while holding appmnt. of Dep. Dir. of Vety. Servs. of an Army (July 4).

Capt. C. H. Hylton-Jolliffe, F.R.C.V.S., Res. of Off., to be temp. Maj. while holding appmnt. of Asst. Dir. of Vety. Servs. of a Div. (May 11 to June 29).

Temp. Lieut. A. Plant relinquishes commn. (Aug. 18).

Aug. 18.

Temp. Lieut. H. H. Bishop relinquishes commn. on termination of engagement (Aug. 8).

Aug. 19.

Temp. Lieut. C. W. Finnemore relinquishes his commn. on account of ill-health (Aug. 20).

Aug. 21.

To be temp. Lieut. :—A. Carter (Aug. 7).

Aug. 23.

To be temp. Lieut :—J. Anderson (Aug. 9).

TERRITORIAL FORCE. ARMY VETERINARY CORPS.

Aug. 23.

Capt. T. D. Young is granted the temp. rank of Major whilst commanding a Vety. Hospital (May 20).

The following casualties are reported :—

WOUNDED, SHOCK—SHELL—Farrier Qr.-Mr. Sgt. J. Goodison, S.E. 14111.

DIED—Pte. A. Chetwynd, 10773.

KILLED—Actg. Sgt. A. T. Vaughan, 7259.

Anglo-Franco-Belgian Veterinary Relief Fund.

The following additional donation is reported :—

Arthur Goulé, G.V.O., S. Africa	£5	5	0
Previously reported	212	11	3
Total	£217	16	3

Professor Brodie.

Dr. THOMAS GREGOR BRODIE, Professor of Physiology at Toronto University, and a Captain in the Canadian Army Medical Corps, died suddenly at Hampstead on Sunday, 20th August, in his 51st year.

Professor Brodie was the son of the Rev. A. Brodie, vicar of Grandborough, and was educated at King's College School, London, and St. John's, Cambridge. He soon became known as an authority on physiology, and among the posts he held were those of Director of the Research Laboratories of the Royal Colleges of Physicians and Surgeons, Professor of Physiology at the Royal Veterinary College, and Lecturer at the London School of Medicine for Women. He was elected to the Toronto Chair in 1908.

Deleterious Liquids or Substances by Post—Revised regulations.

ARTICLES SENT FOR MEDICAL EXAMINATION OR ANALYSIS.

Deleterious liquids or substances, though otherwise prohibited from transmission by post, may be sent for medical examination or analysis to a recognised Medical Laboratory or Institute, whether or not belonging to a public health authority, or to a qualified Medical Practitioner or Veterinary Surgeon within the United Kingdom, by **Letter Post, and on no account by Parcel Post,** under the following conditions :—

Any such liquid or substance must be enclosed in a receptacle, hermetically sealed or otherwise securely closed, which receptable must itself be placed in a strong wooden, leather, or metal case in such a way that it cannot shift about, and with a sufficient quantity of some absorbent material (such as saw-dust or cotton wool) so packed about the receptable as absolutely to prevent any possible leakage from the package in the event of damage to the receptacle. The packet so made up must be conspicuously marked "Fragile with care," and bear the words "Pathological Specimen."

Any packet of the kind found in the parcel post, or found in the letter post not packed and marked as directed, will be at once stopped and destroyed with all its wrappings and enclosures. Further, any person who sends by post a deleterious liquid or substance for medical examination or analysis otherwise than as provided by these regulations is liable to prosecution.

If receptacles are supplied by a Laboratory or Institute, they should be submitted to the Secretary, General Post Office, in order to ascertain whether they are regarded as complying with the regulations.

DISEASES OF ANIMALS ACTS 1894 TO 1914, SUMMARY OF RETURNS.

Period.	Anthrax		Foot-and-Mouth Disease.		Glanders.†		Parasitic Mange. ‡		Sheep Scab.	Swine Fever.	
	Out-breaks (a)	Animals.	Out-breaks (a)	Animals.	Out-breaks (b)	Animals.	Out-breaks (b)	Animals.	(b)	Out-breaks (a)	Slaughtered. *
GT. BRITAIN. Week ended Aug. 19	6	9					20	31	2	59	57
Corresponding week in 1915 ...	5	5					16	26		65	301
Corresponding week in 1914 ...	7	9			2	2	3	3	1	58	347
Corresponding week in 1913 ...	6	9			2	2	14	28	2	38	704
Total for 34 weeks, 1916	366	433	1	24	34	87	1699	3801	182	3233	8589
Corresponding period in 1915 ...	412	472			35	64	‡573	‡1247	159	2936	13154
Corresponding period in 1914 ...	512	555	11	74	72	218	1519	2631	152	2769	28759
Corresponding period in 1913 ...	373	411			112	288	1894	3826	129	1672	22607

‡ The Parasitic Mange Order of 1911 was suspended from 6th August, 1914, to 27th March, 1915, inclusive.

(a) Confirmed. (b) Reported by Local Authorities. † Counties affected, animals attacked :— Excluding outbreaks in army horses.

Board of Agriculture and Fisheries, August 22, 1916

IRELAND. Week ended **Aug. 12**	...	...	...	...	...	...	Outbreaks 1	5	12	12
Corresponding Week in 1915 ...	...	...	...	...	...	...	3	5	5	23
Corresponding Week in 1914 ...	...	...	...	...	...	...	2	1	6	24
Corresponding Week in 1913 ...	...	...	...	...	...	...	2	5	3	5
Total for 33 weeks, 1916 ...	3	7	...	...	...	...	46	262	215	1298
Corresponding period in 1915 ...	1	1	...	...	1	...	49	275	170	949
Corresponding period in 1914 ...	1	1	76	957	...	...	58	380	150	744
Corresponding period in 1913 ...	...	...	...	...	...	...	96	358	106	613

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, Aug. 14, 1916.

NOTE.—The figures for the Current Year are approximate only. * As diseased or Exposed to Infection

Veterinary Societies—Addresses.

BORDER COUNTIES V.M.S.
Pres: Mr. H. Barrow, M.R.C.V.S., Ireby, Carlisle
Hon. Sec: Mr. R. Craig Robinson, M.R.C.V.S., Carlisle
Meetings, Second Friday of Feb., June, and October

GLASGOW V.M.S.
Pres.
Hon. Sec. Mr. John S. Keane, 11 Falkland Mansions, Kelvinside

ROYAL VETERINARY COLLEGE V.M.A.
Pres. & Hon. Sec: Mr. B. Gorton, M.R.C.V.S., M.P.S.
Hon. Treas: Prof. E. F. Shave, F.R.C.V.S.

ASSOCIATION OF VETERINARY OFFICERS OF HEALTH
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Hon, Sec. & Treas. Mr. A. M. Trotter, M.R.C.V.S., Moore Street, Abattoir, Glasgow

NATIONAL ASSOCIATION OF VETERINARY INSPECTORS
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MUNSTER VETERINARY INSPECTORS' ASSOCIATION
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NATIONAL VETERINARY BENEVOLENT & MUTUAL DEFENCE SOCIETY.
Pres: Mr. W. A. Taylor, F.R.C.V.S., Brick-st, Manchester
Hon. Sec: & *Treas*: Mr. G. H. Locke, M.R.C.V.S. Grosvenor Street, Oxford-st., Manchester

VICTORIA VETERINARY BENEVOLENT FUND.
Pres. Mr. S. H. Slocock, F.R.C.V.S., Montague Rd, Hounslow
Hon. Sec. & Treas: Mr. W. Shipley, F.R.C.V.S. South Town, Great Yarmouth

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V. Pres: Maj. A. P. Gribben, F.V.O., M.R.C.V.S.
Hon. Sec. & Treas: Mr. MAX. HENRY, M.R.C.V.S., B.V.SC. (SYD). 56 Bridge Street, Sydney

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Vice-Pres: Dr. Geo. Howell, V.S., Vancouver
Sec. & Treas.: Dr. K. Chester, V.S., White Rock

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Sec: Mr. J. P. A. Houde, Montreal

PROVINCE OF QUEBEC V.M.A.
Hon. Sec. Mr. Gustave Boyer, Rigaud, P.Q.

VETERINARY ASSOCIATION OF ALBERTA
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Sec: & *Treas*: Mr. L. A. Wilson, Toronto, Ontario

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Hon. Sec: Mr. G. W. Lee, M.R.C.V.S., G.V.S., P.O. Box 93, Johannesburg

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Hon. Sec. & Treas. Mr. J. W. Crowhurst, F.R.C.V.S. Longmarket Street, Cape Town

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Hon. Sec. & Treas: Mr. Wm. Hilton, Winnipeg

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Hon Sec. & Treas.

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Vice-Presidents: Mr. J. H. Carter, F.R.C.V.S., F.R.S.E.
Mr. W. J. Mulvey, F.R.C.V.S., J.P.
Secretary and Registrar: Mr. Fred Bullock,
10 Red Lion Square, London, W.C.

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Assist. Sec: Mr. W. L. Harrison, F.R.C.V.S. (*on Service*),
11 Anchor Terrace, Southwark Bridge, S.E.
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Meetings, 1st Thursday in April, June, Sept., & Dec.

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Pathological Sec: Mr. D. C. Matheson, F.R.C.V.S.
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Camden House, High-st., West Bromwich
Hon. Treas. Mr. J. J. Burchnall, M.R.C.V.S., Barrow-on-Soar
Meetings, Second Tuesday, Wednesday, Thursday, and Friday alternately in Feb., May, Aug. and Nov.

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Pres:
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Meetings, Third Friday, Feb., May, Aug. and Nov.

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Hon. Sec: Mr. J. S. Lloyd, F.R.C.V.S., Sheffield

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Pres: Mr. Hugh Williams, M.R.C.V.S., Ty Croes
Hon. Sec. Mr. L. W. Wynn Lloyd, M.R.C.V.S., Carnarvon
Meetings, First Tuesday, March and September

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Hon. Sec. & Treas: Mr. F. H. Sanderson, M.R.C.V.S.
Victoria Road, Darlington
Meetings, First Friday, Mar., June, Sept. and Dec.

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Sec. T. C. Toope, 34 High Street, Dover

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Hon. Sec: Mr. H. A. MacCormack, M.R.C.V.S.,
122 St. George's Avenue, Tufnell Park, N.
Meetings, First Thursday in each month, except August and September, 10 Red Lion Square, Holborn, at 7 p.m.

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Pres. Mr. T. E. Barcham, M.R.C.V.S., Paston, Norfolk
Hon Sec. & Treas: Mr. A.C. Holl, M.R.C.V.S., New Buckenham
Meetings, Second Tuesday, Feb., July and Sept.

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Long Stanton, Cambridge
Hon. Sec: & Treas: Mr. Tom Hicks, M.R.C.V.S.,
Boston Road, Sleaford
Meetings, Second Thursday Feb., June, and October

ROYAL COUNTIES V.M.A.

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Hon. Sec. & Treas: Mr. G. P. Male, M.R.C.V.S., Reading
Meetings, Last Friday, Jan., April, July and Nov.

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Hon. Sec: Mr. J. T. Angwin, M.R.C.V.S., Arundel.
Hon. Treas: Mr. E. W. Baker, M.R.C.V.S., Wimborne
Meetings, Last Thursday, Mar., June and Sept.

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Hon. Sec. & Treas. Mr. Theo. C. Toope, M.R.C.V.S.,
34 High Street, Dover

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Mr. C. E. Tucker, M.R.C.V.S., 7 Greville St., Bideford (*pro.tem.*)
Hon. Treas: Mr. P. G. Bond, M.R.C.V.S., Plymouth
Meetings, Third Thursday, March, July and November

Irish Branch:

Pres. Mr. A. Watson, Municipal Buildings, Dublin
Sec. Mr. P.D. Reavy, Leafield, Bundoran, Co. Donegal

CENTRAL V.A. OF IRELAND.

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Hon. Sec. Mr. E. C. Winter, F.R.C.V.S., Queen-st., Limerick
Treas; Mr. J. F. Healy, M.R.C.V.S., Midleton

CONNAUGHT V.M.A

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Hon. Sec. & Treas. Mr. A. J. Moffett, M.R.C.V.S., Galway

VET. MED. ASSN. OF IRELAND.

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Hon. Sec: Prof. J.J. O'Connor, M.R.C.V.S., R.V. Coll., Dublin
Hon. Treas: Prof. J. F. Craig, M.A., M.R.C.V.S.,
R.V. Coll., Dublin

NORTH OF IRELAND V.M.A.

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Hon. Sec; Mr. J. A. Jordan, M.R.C.V.S., Belfast
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NORTH OF SCOTLAND V.M.S.

Pres: Mr. D. Cumming, M.R.C.V.S., Peterculter, Aberdeenshire
Hon. Sec. & Treas: Mr. G. Howie, M.R.C.V.S. Alford, Aberdeen
Meetings, Last Saturday in January and August

ROYAL SCOTTISH V.S.

Pres: Mr. Reid, M.R.C.V.S., Auchtermuchty.

SCOTTISH METROPOLITAN V.M.S.

Pres: Mr. J. Riddoch, M.R.C.V.S., Edinburgh
Hon. Sec. & Treas: Mr. Jas. Henderson, M.R.C.V.S.,
Public Health Dept., City Chambers, Edinburgh

WEST OF SCOTLAND V.M.A.

Pres: Prof. John R. McCall, M.R.C.V.S., Vety. Coll. Glasgow
Hon. Sec: Mr. J. F. Macintyre, M.R.C.V.S.,
19 Bank Street, Hillhead, Glasgow
Hon. Treas: Mr. Geo. W. Weir, M.R.C.V.S.,
88 Crookston Street, Glasgow
Meetings, Second Wednesday, May, Oct. and January.